

**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:

Beate Hoffmann

Pascale Mollier

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Group Art Unit: Unknown

Examiner: Unknown

Serial No.: Unassigned

Atty. Dkt. No.: CHEP:003US

Filed: Concurrently Herewith

For: PROMOTER EXPRESSED SPECIFICALLY  
IN PLANT ROOT CELLS, VECTORS AND  
RECOMBINANT HOST CELLS  
CONTAINING SUCH A PROMOTER AND  
TRANSGENIC PLANTS OBTAINED

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**PRELIMINARY AMENDMENT**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

Applicants respectfully submit this Preliminary Amendment in the above-referenced case.

Consideration of this case in view of the amendments made herein is respectfully requested.

**AMENDMENT**

**In the Specification:**

Please amend the specification as follows:

At page 1, line 5, please insert the following paragraph:

--This application is a continuation of PCT Application No. PCT/FR00/01768 filed 23 June 2000, which claims priority to French Application No. 99/08185 filed 25 June 1999.--

**In the Claims:**

Please cancel claims 1-25 of the PCT application, without prejudice or disclaimer.

Please add new claims 26-51 as follows:

--26. (New) An isolated or purified nucleic acid comprising a plant promoter comprising a polynucleotide possessing at least 80% nucleotide identity with a fragment of at least 200 consecutive nucleotides of a nucleotide sequence SEQ ID No. 1 or the complement thereof.

27. (New) The nucleic acid of claim 26, further defined as comprising a different sequence from that entered under the reference No. AC 007 289 in the EMBL database.

28. (New) The nucleic acid of claim 26, further defined as comprising all or part of a polynucleotide hybridizing under hybridization conditions of high stringency with the nucleotide sequence SEQ ID No. 1 or the complement thereof.

29. (New) The nucleic acid of claim 26, further defined as comprising one of the following sequences:

the polynucleotide extending from the nucleotide at position 1 to the nucleotide at position 2400 of the sequence SEQ ID No. 3;

the polynucleotide extending from the nucleotide at position 493 to the nucleotide at position 2400 of the sequence SEQ ID No. 3;

the polynucleotide extending from the nucleotide at position 1076 to the nucleotide at position 2400 of the sequence SEQ ID No. 3;

the polynucleotide extending from the nucleotide at position 1976 to the nucleotide at position 2400 of the sequence SEQ ID No. 3; and

the polynucleotide extending from the nucleotide at position 2040 to the nucleotide at position 2400 of the sequence SEQ ID No. 3.

30. (New) The nucleic acid of claim 26, further defined as comprising a nucleotide sequence of interest placed under the control of the plant promoter.
31. (New) The nucleic acid of claim 30, further defined as comprising the nucleotide sequence SEQ ID No. 2.
32. (New) The nucleic acid of claim 30, wherein the nucleotide sequence of interest is selected from the group consisting of coding sequences of genes interacting with parasites or pathogens, sequences coding for the endochitinases, sequences coding for proteins protecting the plant from hydric or salt stress, genes acting on sugar content in a plant and genes acting on nitrate transport.
33. (New) An isolated nucleic acid comprising 200 to 2000 consecutive nucleotides of a polynucleotide possessing at least 80% nucleotide identity with a fragment of at least 200 consecutive nucleotides of a nucleotide sequence SEQ ID No. 1 or the complement thereof, which nucleic acid is further defined as a promoter.
34. (New) A vector comprising a polynucleotide sequence possessing at least 80% nucleotide identity with a fragment of at least 200 consecutive nucleotides of a nucleotide sequence SEQ ID No. 1 or the complement thereof.
35. (New) The vector of claim 34, further defined as being substantially identical to a vector contained in an *E. coli* strain deposited with the NCCM on 25 May 1999 under the access No. I-2218.
36. (New) A recombinant host cell comprising a vector, comprising a polynucleotide sequence possessing at least 80% nucleotide identity with a fragment of at least 200 consecutive nucleotides of a nucleotide sequence SEQ ID No. 1 or the complement thereof.

37. (New) The cell of claim 36, further defined as a bacterial or plant cell.
38. (New) The cell of claim 37, further defined as an *Agrobacterium tumefaciens* cell.
39. (New) The cell of claim 36, further defined as a cell of an *E. coli* strain deposited with the NCCM on 25 May 1999 under the access No. I-2218.
40. (New) The cell of claim 36, further defined as being comprised in a plant.
41. (New) A recombinant plant comprising a polynucleotide sequence possessing at least 80% nucleotide identity with a fragment of at least 200 consecutive nucleotides of a nucleotide sequence SEQ ID No. 1 or the complement thereof.
42. (New) A transgenic plant comprising a polynucleotide sequence possessing at least 80% nucleotide identity with a fragment of at least 200 consecutive nucleotides of a nucleotide sequence SEQ ID No. 1 or the complement thereof.
43. (New) The transgenic plant of claim 42, further defined as a colza, tobacco, or maize plant.
44. (New) A method for obtaining transgenic plant comprising:  
obtaining a vector comprising a plant promoter having a polynucleotide sequence possessing at least 80% nucleotide identity with a fragment of at least 200 consecutive nucleotides of a nucleotide sequence SEQ ID No. 1 or the complement thereof operatively linked to a nucleotide sequence of interest; and  
employing the vector to produce a transgenic plant which comprises the nucleotide sequence of interest placed under the control of the plant promoter.
45. (New) The method of claim 44, further defined as comprising:  
producing of a recombinant host cell comprising a vector comprising a plant promoter having a polynucleotide sequence possessing at least 80% nucleotide identity with

a fragment of at least 200 consecutive nucleotides of a nucleotide sequence SEQ ID No. 1 or the complement thereof operatively linked to a nucleotide sequence of interest;

regeneration of one or more a plants from the recombinant host cell; and

selection of one or more regenerated plants which have integrated the nucleotide sequence of interest placed under the control of the plant promoter.

46. (New) The method of claim 44, further defined as comprising:

producing an *Agrobacterium tumefaciens* recombinant host cell comprising a plant promoter having a polynucleotide sequence possessing at least 80% nucleotide identity with a fragment of at least 200 consecutive nucleotides of a nucleotide sequence SEQ ID No. 1 or the complement thereof operatively linked to a nucleotide sequence of interest;

infecting one or more plant of interest with the *Agrobacterium tumefaciens* recombinant host cell; and

selecting one or more plant which has integrated the nucleotide sequence of interest placed under the control of the plant polynucleotide promoter.

47. (New) The method of claim 44, further defined as comprising:

transfecting a plant cell with polynucleotide comprising a plant promoter having a polynucleotide sequence possessing at least 80% nucleotide identity with a fragment of at least 200 consecutive nucleotides of a nucleotide sequence SEQ ID No. 1 or the complement thereof operatively linked to a nucleotide sequence of interest;

regeneration of one or more plant from the transfected cell.

selection of one or more plants that have integrated the nucleotide sequence of interest placed under the control of the plant polynucleotide promoter.

48. (New) The method of claim 44, further comprising:  
crossing of two transgenic plants obtained from the method; and  
selecting one or more plants homozygous for the nucleotide sequence of interest.
49. (New) The method of claim 44, further comprising:  
crossing a transgenic plant obtained by the method with a plant of the same species; and  
selecting one or more plant derived from the crossing which has conserved the transgene.
50. (New) A transgenic plant comprising a plant promoter having a polynucleotide sequence possessing at least 80% nucleotide identity with a fragment of at least 200 consecutive nucleotides of a nucleotide sequence SEQ ID No. 1 or the complement thereof operatively linked to a nucleotide sequence of interest and expressing the nucleotide sequence of interest specifically in the different cell types of the root at all stages of development.
51. (New) A seed of a transgenic plant comprising a plant promoter having a polynucleotide sequence possessing at least 80% nucleotide identity with a fragment of at least 200 consecutive nucleotides of a nucleotide sequence SEQ ID No. 1 or the complement thereof operatively linked to a nucleotide sequence of interest. --

### **REMARKS**

The specification has been amended to recite the priority data, to cancel claims 1-25 of the PCT application, and to add new claims 26-51. Support for the new claims is found in the specification and claims as originally filed. For the convenience of the Examiner, a clean set of the pending claims is attached hereto as Appendix A.

Variable	Mean	SD	Min	Max
Age (years)	45.2	12.5	18	78
Gender (Male/Female)	52/48			
Education (years)	12.8	2.1	8	18
Occupation (Professional/Non-Professional)	35/65			
Marital Status (Married/Single/Divorced)	60/30/10			
Income (USD/month)	1,200	300	500	2,500
Health Insurance (Yes/No)	85/15			
Smoking Status (Smoker/Non-Smoker)	20/80			
Alcohol Consumption (Regular/Occasional/None)	10/40/50			
Exercise Frequency (Times/week)	2.5	1.5	0	5
Dietary Habits (Vegetarian/Non-Vegetarian)	15/85			
Stress Level (Low/Medium/High)	30/40/30			
Sleep Quality (Good/Fair/Poor)	40/30/30			
Family Size (Number of children)	1.5	1.0	0	4
Work Hours (Hours/week)	40	5	20	60
Comorbidities (Hypertension/Diabetes/Cholesterol)	15/10/20			
Medication Use (Yes/No)	25/75			
Healthcare Access (Easy/Difficult)	60/40			
Healthcare Costs (USD/year)	500	200	100	1,000
Healthcare Satisfaction (Satisfied/Dissatisfied)	70/30			
Healthcare Access (Distance to facility)	5	3	1	15
Healthcare Costs (Out-of-pocket)	300	150	50	600
Healthcare Satisfaction (Provider/Staff)	65/35			
Healthcare Access (Waiting time)	10	5	5	20
Healthcare Costs (Insurance coverage)	400	200	100	800
Healthcare Satisfaction (Facility/Equipment)	60/40			
Healthcare Access (Transportation)	15	8	5	30
Healthcare Costs (Prescription costs)	100	50	20	200
Healthcare Satisfaction (Healthcare system)	55/45			
Healthcare Access (Healthcare quality)	60/40			
Healthcare Costs (Healthcare quality)	400	200	100	800
Healthcare Satisfaction (Healthcare quality)	60/40			
Healthcare Access (Healthcare quality)	60/40			
Healthcare Costs (Healthcare quality)	400	200	100	800
Healthcare Satisfaction (Healthcare quality)	60/40			
Healthcare Access (Healthcare quality)	60/40			
Healthcare Costs (Healthcare quality)	400	200	100	800
Healthcare Satisfaction (Healthcare quality)	60/40			
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Healthcare Access (Healthcare quality)	60/40			
Healthcare Costs (Healthcare quality)	400	200	100	800
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Healthcare Costs (Healthcare quality)	400	200	100	800
Healthcare Satisfaction (Healthcare quality)	60/40			
Healthcare Access (Healthcare quality)	60/40			
Healthcare Costs (Healthcare quality)	400	200	100	800
Healthcare Satisfaction (Healthcare quality)	60/40			
Healthcare Access (Healthcare quality)	60/40			
Healthcare Costs (Healthcare quality)				

*[Signature]*

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## APPENDIX A Pending Claims

26. An isolated or purified nucleic acid comprising a plant promoter comprising a polynucleotide possessing at least 80% nucleotide identity with a fragment of at least 200 consecutive nucleotides of a nucleotide sequence SEQ ID No. 1 or the complement thereof.

27. The nucleic acid of claim 26, further defined as comprising a different sequence from that entered under the reference No. AC 007 289 in the EMBL database.

28. The nucleic acid of claim 26, further defined as comprising all or part of a polynucleotide hybridizing under hybridization conditions of high stringency with the nucleotide sequence SEQ ID No. 1 or the complement thereof.

29. The nucleic acid of claim 26, further defined as comprising one of the following sequences:

the polynucleotide extending from the nucleotide at position 1 to the nucleotide at position 2400 of the sequence SEQ ID No. 3;

the polynucleotide extending from the nucleotide at position 493 to the nucleotide at position 2400 of the sequence SEQ ID No. 3;

the polynucleotide extending from the nucleotide at position 1076 to the nucleotide at position 2400 of the sequence SEQ ID No. 3;

the polynucleotide extending from the nucleotide at position 1976 to the nucleotide at position 2400 of the sequence SEQ ID No. 3; and

the polynucleotide extending from the nucleotide at position 2040 to the nucleotide at position 2400 of the sequence SEQ ID No. 3.

30. The nucleic acid of claim 26, further defined as comprising a nucleotide sequence of interest placed under the control of the plant promoter.



31. The nucleic acid of claim 30, further defined as comprising the nucleotide sequence SEQ ID No. 2.
32. The nucleic acid of claim 30, wherein the nucleotide sequence of interest is selected from the group consisting of coding sequences of genes interacting with parasites or pathogens, sequences coding for the endochitinases, sequences coding for proteins protecting the plant from hydric or salt stress, genes acting on sugar content in a plant and genes acting on nitrate transport.
33. An isolated nucleic acid comprising 200 to 2000 consecutive nucleotides of a polynucleotide possessing at least 80% nucleotide identity with a fragment of at least 200 consecutive nucleotides of a nucleotide sequence SEQ ID No. 1 or the complement thereof, which nucleic acid is further defined as a promoter.
34. A vector comprising a polynucleotide sequence possessing at least 80% nucleotide identity with a fragment of at least 200 consecutive nucleotides of a nucleotide sequence SEQ ID No. 1 or the complement thereof.
35. The vector of claim 34, further defined as being substantially identical to a vector contained in an *E. coli* strain deposited with the NCCM on 25 May 1999 under the access No. I-2218.
36. A recombinant host cell comprising a vector, comprising a polynucleotide sequence possessing at least 80% nucleotide identity with a fragment of at least 200 consecutive nucleotides of a nucleotide sequence SEQ ID No. 1 or the complement thereof.
37. The cell of claim 36, further defined as a bacterial or plant cell.
38. The cell of claim 37, further defined as an *Agrobacterium tumefaciens* cell.

39. The cell of claim 36, further defined as a cell of an *E. coli* strain deposited with the NCCM on 25 May 1999 under the access No. I-2218.

40. The cell of claim 36, further defined as being comprised in a plant.

41. A recombinant plant comprising a polynucleotide sequence possessing at least 80% nucleotide identity with a fragment of at least 200 consecutive nucleotides of a nucleotide sequence SEQ ID No. 1 or the complement thereof.

42. A transgenic plant comprising a polynucleotide sequence possessing at least 80% nucleotide identity with a fragment of at least 200 consecutive nucleotides of a nucleotide sequence SEO ID No. 1 or the complement thereof.

43. The transgenic plant of claim 42, further defined as a colza, tobacco, or maize plant.

44. A method for obtaining transgenic plant comprising:  
obtaining a vector comprising a plant promoter having a polynucleotide sequence possessing at least 80% nucleotide identity with a fragment of at least 200 consecutive nucleotides of a nucleotide sequence SEQ ID No. 1 or the complement thereof operatively linked to a nucleotide sequence of interest; and  
employing the vector to produce a transgenic plant which comprises the nucleotide sequence of interest placed under the control of the plant promoter.

45. The method of claim 44, further defined as comprising:  
producing of a recombinant host cell comprising a vector comprising a plant promoter  
having a polynucleotide sequence possessing at least 80% nucleotide identity with  
a fragment of at least 200 consecutive nucleotides of a nucleotide sequence SEQ  
ID No. 1 or the complement thereof operatively linked to a nucleotide sequence of  
interest;  
regeneration of one or more a plants from the recombinant host cell; and

selection of one or more regenerated plants which have integrated the nucleotide sequence of interest placed under the control of the plant promoter.

46. The method of claim 44, further defined as comprising:  
producing an *Agrobacterium tumefaciens* recombinant host cell comprising a plant promoter having a polynucleotide sequence possessing at least 80% nucleotide identity with a fragment of at least 200 consecutive nucleotides of a nucleotide sequence SEQ ID No. 1 or the complement thereof operatively linked to a nucleotide sequence of interest;  
infecting one or more plant of interest with the *Agrobacterium tumefaciens* recombinant host cell; and  
selecting one or more plant which has integrated the nucleotide sequence of interest placed under the control of the plant polynucleotide promoter.
47. The method of claim 44, further defined as comprising:  
transfecting a plant cell with polynucleotide comprising a plant promoter having a polynucleotide sequence possessing at least 80% nucleotide identity with a fragment of at least 200 consecutive nucleotides of a nucleotide sequence SEQ ID No. 1 or the complement thereof operatively linked to a nucleotide sequence of interest;  
regeneration of one or more plant from the transfected cell.  
selection of one or more plants that have integrated the nucleotide sequence of interest placed under the control of the plant polynucleotide promoter.
48. The method of claim 44, further comprising:  
crossing of two transgenic plants obtained from the method; and  
selecting one or more plants homozygous for the nucleotide sequence of interest.
49. The method of claim 44, further comprising:  
crossing a transgenic plant obtained by the method with a plant of the same species; and

